



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,922	03/10/2004	Rajan Bhandari	R. Bhandari 1-14-3 (LCNT/	3351
46363 7590 07/20/2007 PATTERSON & SHERIDAN, LLP/ LUCENT TECHNOLOGIES, INC 595 SHREWSBURY AVENUE SHREWSBURY, NJ 07702			EXAMINER CHERY, DADY	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 07/20/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/797,922

Applicant(s)

BHANDARI ET AL.

Examiner

Dady Chery

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/10/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Ofek (US Patent 6,735,199, hereinafter 199).

Regarding claims 1 Ofek discloses *a method for guaranteeing delivery times of data communicated between communications devices of an asynchronous network* (Fig. 1, abstract) comprising:

*generating a global timing schedule (global common reference time) for synchronizing the communication between said communications devices* (Col. 11, lines 49 – 56). Ofek discloses a method where a common time reference is generated for synchronization of transmission data between a plurality of communications devices

*and in response to at least one trigger, transmitting and receiving data according to the global timing schedule* (Col. 11, lines 49 – 64). The data is transferred in and out (receiving and transmitting) in response to the common time reference according to a

Art Unit: 2616

predefine time schedule. Which is the same function as described by the instant application.

Regarding claim 2, Ofek discloses *the global timing schedule comprises at least one time frame, each of the at least one time frames including at least one time slot, wherein during each of the at least one time slots each of the communications devices may receive data from only one other communications device* (Col. 12, lines 54 – Col. 12, lines 40).

Regarding claim 3, Ofek discloses *the synchronous data is communicated within each of said time slots* (Col. 11, lines 64 – Col. 12, lines 4). Where the synchronous data is transferred during the fixed time slots.

Regarding claim 4, Ofek discloses *wherein data communication according to said global timing schedule is prioritized such that the delivery time of synchronous data does not exceed a maximum latency allowed for said synchronous data* (col. 11, lines 34 –41).

Regarding claim 5, Ofek discloses *wherein each of said at least one time frame further comprises a period of time for the communication of asynchronous data* (Col. 40, lines 32 – 34). Where the asynchronous data packet is processed during a time slot.

Regarding claim 6, Ofek discloses *the communication of asynchronous data is performed without undermining conventional Ethernet protocol standards* (Col. 40, lines 32 –40). The method discloses by Ofek uses fix time slot, which is a system that cannot undermine the conventional Ethernet protocol standard.

Regarding claims 7-9, Ofek discloses *the method comprises a priority of communication during each of said at least one time slots* (Col. 18, lines 47-59). Where different priority (CBR, VBR, BE) is defined during each time slot.

Regarding claim 10, Ofek discloses *the communications devices generates a respective trigger for enabling the transmitting and receiving of data by said communications device according to said global timing schedule* (Col. 11, lines 49 – 56). The communication device generates a signal responsive to the common time reference schedule.

3. Claims 11 -23 are rejected under 35 U.S.C. 102(e) as being anticipated by Ofek et al. (US Patent 6,973,090, hereinafter 090).

Regarding claim 11, Ofek discloses *a network interface controller for triggering data communication between communications devices of an asynchronous network having guaranteed delivery times* (Fig. 1) comprising:

*a counting device (6023) for generating a signal in response to counting a predetermined number of counts* (Col. 20, 51- 53);

*a transmit trigger generator (6011) for receiving the signal from said counter and, in response, generating a transmit trigger signal* (Col. 20, lines 37 –40);

*a transmit memory device (6600), for storing data to be transmitted* (Col. 20, lines 46 – 48);

Art Unit: 2616

*a transmit memory manager(6012) for receiving the transmit trigger signal from said transmit trigger generator and, in response, directing at least a portion of said data stored in said memory device to a transmission device for transmission of said data (Col. 20, lines 39 – 43) ;*

*a receive trigger generator (6021) for receiving the signal from said counter and, in response, generating a receive trigger signal (Col. 20, lines 43 – 46);*

*a receive memory device (6600), for storing received data(Col. 20, lines 46 – 48);*

*and a receive memory manager (6022) for receiving the receive trigger signal from said receive trigger generator and, in response, directing received data to a location within said receive memory device (Col. 20, lines 43 –46).*

Regarding claim 12, Ofek discloses *the network interface controller (Fig. 38A) of claim 11, wherein said counting device generates a signal in response to counting each of a plurality of predetermined count numbers (Col. 55, lines 3 – 10). Where the count device generates a signal in response to a count number.*

Regarding claim 13, Ofek discloses *the network interface controller of claim 11, further comprising a synchronization device (Fig. 31A and 31B) for generating a global timing schedule (Fig. 2 and 3) within which the communication between said communications devices is synchronized (Col. 4, lines 49 – 65 and Col. 56, lines 15 – 19). Where each switches A, B, C is synchronized based on common time reference generating by a controller. The counting device is set to a predetermined count number*

*in response to a signal from said synchronization device (Col. 55, lines 3 –10), The signal depicting the start of a time frame of said global timing schedule (Col. 15, lines 10 –17). Where the signal depicts the beginning of the UTC is considered as the same function as the instant application.*

Regarding claim 14, Ofek discloses the network interface controller (fig. 2) of claim 11, wherein said counting device begins counting from a predetermined count number in response to a signal depicting the start of a time frame of a global timing schedule within which the communication between said communications devices is synchronized (Col.14, lines 35 – Col. 15, lines 17). Where the count device begins count at the start of global timing schedule.

Regarding claim 15, Ofek discloses wherein said transmit trigger generator, said transmit memory device, said receive trigger generator and said receive memory device are partitioned into different sections (Fig. 10 and 20).

Regarding claims 16 -18, Ofek discloses the network interface controller of claim 15, wherein data to be transmitted is stored within respective sections of said transmit memory device such that respective triggers generated by respective sections of said transmit trigger device cause data in respective sections of said transmit memory device to be transmitted (Col. 24, lines 45 – Col. 25, lines 20). The select-in signal determines which of the buffers will receive data units from the communication channel. Which is the same function as described by the instant application.

Regarding claim 19, Ofek discloses *an asynchronous network having guaranteed delivery times for data communicated between communication devices (Fig. 1), comprising:*

*a plurality of communications devices (1100 and 900), each of said communications devices including a network interface controller, Those devices included a network interface controller for communicating to the network.;*

*a counting device (6023) for generating a signal in response to counting a predetermined number of counts (Col. 20, 51- 53);*

*a transmit trigger generator (6011) for receiving the signal from said counter and, in response, generating a transmit trigger signal (Col. 20, lines 37 –40);*

*a transmit memory device (6600), for storing data to be transmitted (Col. 20, lines 46 – 48);*

*a transmit memory manager(6012) for receiving the transmit trigger signal from said transmit trigger generator and, in response, directing at least a portion of said data stored in said memory device to a transmission device for transmission of said data (Col. 20, lines 39 – 43) ;*

*a receive trigger generator (6021) for receiving the signal from said counter and, in response, generating a receive trigger signal (Col. 20, lines 43 – 46);*

*a receive memory device (6600), for storing received data(Col. 20, lines 46 – 48);*



*and a receive memory manager (6022) for receiving the receive trigger signal from said receive trigger generator and, in response, directing received data to a location within said receive memory device (Col. 20, lines 43 –46).;*

*a network manager for communicating global information among said plurality of communications devices (Col. 3, lines 67 –Col. 4, lines 7). Ofek discloses a Fractional Lambda switching that communicated the global common time reference to the plurality of communication devices. The Fractional Lambda switching has the same function as the network manager.*

*a synchronization device for generating a global timing schedule for synchronizing the communication between said communications devices (Fig. 2 and 3 ,Col. 4, lines 49 – 65 and Col. 56, lines 15 –19). Where each switches A, B, C is synchronized based on common time reference generating by a controller, wherein in response to at least one trigger, data communicated between the plurality of communication devices in said asynchronous network is transmitted and received according to said global timing schedule (Col. 13, lines 13 – 30).*

Regarding claims 20 and 21, Ofek discloses *the network interface controller (Fig. 38A) of claim 11, wherein said counting device generates a signal in response to counting each of a plurality of predetermined count numbers (Col. 55, lines 3 – 10). Where the count device generates a signal in response to a count number.*

Regarding claim 22, Ofek discloses *the global timing schedule comprises a recurring time frame* (Fig. 2 and 3, Col. 4, lines 49 – 64). Where the common time reference has a recurring time frame (TF1 –TF9)

Regarding claim 23, Ofek discloses *a transmit trigger signal generated by a communications device generates a time slot in a time frame of said global timing schedule in which said communications device may transmit and receive data* (Col. 13, lines 13 – 22).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2616

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over the 090 patent in the view of the 199 patent.

Regarding claim 24, the 090 patent discloses all the limitations of claim 24 except *the data communication according to said global timing schedule is prioritized such that the delivery time of synchronous data does not exceed a maximum latency allowed for said synchronous data.*

However, the 199 patent teaches *wherein data communication according to said global timing schedule is prioritized such that the delivery time of synchronous data does not exceed a maximum latency allowed for said synchronous data* (col. 11, lines 34 –41).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to prioritized the delivery time of synchronous data does not exceed a maximum latency allowed for the synchronous data for the purpose of

Art Unit: 2616

managing data transfer of data packets from source to destination (Col. 11, lines 43 – 45).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dady Chery whose telephone number is 571-270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dady Chery 07/13/2007

  
RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER